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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,130	08/22/2003	Gregg W. Frey	2003P09222US	8859

7590 06/28/2007
Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

LONEY, DONALD J

ART UNIT	PAPER NUMBER
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1772

MAIL DATE	DELIVERY MODE
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06/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/646,130	Applicant(s) FREY ET AL.	
	Examiner Donald Loney	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 32-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 32-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 13 and 14 is withdrawn in view of the newly discovered reference(s) to Lemmond (3171106). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Lemmond (3171106).

Lemmond discloses a layer 11 containing magnetic particles 12 aligned such that their longest dimension is perpendicular to the top and bottom surfaces of the layer. This rejection is being made since this claim does not positively recite the sonic transducer limitations as in the other independent claims amended in the last response filed March 28, 2007.

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4. Claims 1-12 and 32-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Aime (6467138).

Aime discloses a matching layer 20 containing a plurality of conductive elements 22 therein that extend from the top to the bottom of the layer. The elements can be cylindrical. The elements are connected to conductive layers 18,22 per claim 1. At least some of the connections are located toward the edge of the layer. Refer to figures 4, 5a-d, 6a-d,g,f and column 3, lines 28-31, column 4, lines 1-31, column 5, lines 49-64 and column 6, lines 13-39. With regards to claim 3, the layer is part of a transducer and contains more than one conductor path there through. With regards to claim 5, the process limitation as to the material being castable does not distinguish from the prior art which teaches a material for forming the layer. With regards to claim 7, the elements 22 are considered as through vias (i.e. an opening or space therein) since the claim fails to recite a structure to the via which would distinguish from the prior art. With regards to claim 9, the elements are considered a film since they are formed of a material through the layer. With regards to claims 32-37, the layer is on a transducer, of which can be considered the first side since this is just relative to how one looks at the structure. Alternatively with respect to claims 1, 3 and 5, Aime discloses a layer 14 or 15, as a matching layer, which contains magnetic particles therein (column 5, lines 33-38). These particles would be aligned in some manner with respect to the top and bottom surface of the layer which claims 1, 3 and 5 would not distinguish there from since no particular alignment is recited in order to distinguish there from.

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5. Claims 1-10, 12 and 32-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Corbett et al (6266857).

Colbertt et al teaches a matching layer that has holes there through and is then plated with a metal conductor that covers the top and bottom of the layer and also coats the interior of the hole (i.e. a conductor that extends at least partially into the layer). The holes 32 are located more towards the edge of the layer. Refer to figures 4A-4D, 5A-5C in Corbett et al that shows backing layer 24 and metal conductive layer 34 extending through holes 32 along with column 4, line 18 through column 5, line 25. With regards to claim 1, Corbett et al shows a metal layer on both sides of the film in figures 4C and 4D. With regards to claim 3, the layer is part of a transducer and contains more than one conductor path there through. With regards to claim 5, the process limitation as to the material being castable does not distinguish from the prior art which teaches a material for forming the layer. With regards to claim 7, the elements 33 are considered as through vias (i.e. an opening or space therein) since the claim fails to recite a structure to the via which would distinguish from the prior art. With regards to claim 9, the elements are considered a film since they are formed of a material through the layer. With regards to claims 32-37, the layer is on a transducer, of which can be considered the first side since this is just relative to how one looks at the structure.

6. Claims 3, 5-12 and 33-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Lum et al (5701901)

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Lum et al teaches a matching layer 196 that contains a conductor 212 aligned relative to the top and bottom surface thereof. Refer to figures 20A, 20B, and 21 and 22. The conductors are perpendicular to the top and bottom surfaces as shown in the figures per claims 7 and 9-11. There is more than one conductor 212 per claim 3 as shown in figure 20B. The conductors are close to the edge per claim 4, in figures 20A, and 21 and 22. A conductor (i.e. gold electrode layers) is located on both surfaces of the layer (see column 12, lines 60-65).

7. Claims 1-12 and 32-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller et al (5267221).

Miller et al discloses a matching layer 37a containing a plurality of conductive elements 39 therein that extend from the top to the bottom of the layer. The elements can be cylindrical. The elements are connected to conductive metal layers 35 and 41 on both sides thereof per claim 1. At least some of the connections are located toward the edge of the layer. Refer to figure 5 and the corresponding elements referred to above therein. With regards to claim 3, the layer is part of a transducer and contains more than one conductor path there through. With regards to claim 5, the process limitation as to the material being castable does not distinguish from the prior art which teaches a material for forming the layer (i.e. epoxy which is castable). With regards to claim 7, the elements 22 are considered as through vias (i.e. an opening or space therein) since the claim fails to recite a structure to the via which would distinguish from the prior art. With regards to claim 9, the elements are considered a film since they are formed of a material through the layer. With regards to claims 32-37, the layer is on a transducer, of

which can be considered the first side since this is just relative to how one looks at the structure.

Response to Arguments

8. Applicant's arguments filed March 28, 2007 have been fully considered but they are not persuasive. In response to applicant's arguments that Both Aime and Colbert et al teach the conductors in the backing layer, not the matching layer, the recitation a matching layer has not been given patentable weight because the recitation occurs in the preamble and it does not distinguish from a the layer as shown in the prior art. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The applicant's argument's that the Jepson type format of claim 1 positively recites a matching layer. While true, the improvement recited is aligning a conductor relative to the top and bottom surface at least partially within a layer in the transducer, which is shown by the prior art. The preamble does not mention a backing layer in order to distinguish the layers of the invention from the prior art. Additionally, Corbett discloses the layer 24 as being an acoustic layer (column 4, lines 18-20), therefore, the recitation of matching would not distinguish there from. The applicant also argues that Lum et al does not teach the additional conductor in the layer or element of the layer, however, as indicated above multiple conductors 212 are shown in

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figure 20B. With regards to the layer being castable, the vias and the film per claims 5, 7 and 9 the examiner has addressed this above within the rejection.

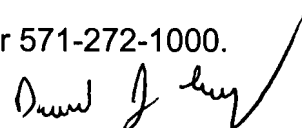
The applicant argues the groove in Lum is not a via, however, the solid material that fills the groove can be considered a via (i.e. a path between the top and bottom layer) since no particular structure thereto is recited which would distinguish therefrom. The applicant argues that the epoxy in Lum is not a conductive film, however, at column 13, lines 4-7, the material is disclosed as conductive and would read upon a film extending between the top and bottom of the layer. The applicant argues that Miller discloses the conductors in the backing layer not the matching layer, however at column 7, line 68 through column 8, line 35, portion 37A (shown in figure 5) is disclosed as a matching layer and contains the conductors 39.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Loney whose telephone number is (571) 272-1493. The examiner can normally be reached on Mon, Tues, Thurs and Fri. 8AM-4PM, flex schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Donald Loney
Primary Examiner
Art Unit 1772

DJL:D.Loney
06/22/07